

SCIENCE IN A TEAM ENVIRONMENT (AKA, HOW TO PLAY NICELY WITH OTHERS)

S.H. Platts¹, L. Primeaux², T. Swarmer², and P.O. Yarbough²

¹NASA Johnson Space Center, Houston, TX, ², KBRWyle Integrated Science and Engineering Group, Houston, TX

So you want to do NASA funded research in a spaceflight analog? There are several things about participating in an HRP managed analog that may be different from the way you normally do work in your laboratory. The purpose of this presentation is to highlight those differences and explain some of the unique aspects of doing this research.

Participation in an HRP funded analog study complement, even if initially selected for funding, is not automatic and involves numerous actions from ISSMP, HRP, and the PI. There are steps that have to be taken and processes to follow before approval and ISSMP-FA integration. After the proposal and acceptance process the Investigator works closely with the Flight Analog team to ensure full integration of their study requirements into a compliment. A complement is comprised of a group of studies requiring a common platform and/or scenario that are able to be integrated on a non-interference basis for implementation. Full integration into the analog platform can be broken down into three phases: integration, preparation, and implementation. These phases occur in order with some overlap in the integration and preparation phase. The ISSMP-FA team integrates, plans and implements analog study complements. Properly defining your research requirements and getting them documented is one of the most critical components to ensure successful integration and implementation of your study, but is also one of the most likely to be neglected by PIs. Requirements that are not documented, or that are documented poorly are unlikely to get done, no matter how much you push.

The process to document requirements is two-fold, consisting of an initial individual requirements integration and then a compliment requirements integration. Understanding the requirements in detail and early ensures that the science is not compromised by outside influences. This step is vital to the integration, preparation, and implementation phases. The individual requirements integration is the first step in ensuring that the research fits into an available analog platform or allows for the Flight Analog team to provide information on structural study changes for participation in the analog. At this early point investigators need to understand exactly what their requirements are to produce relevant data and convey their must have needs to the Flight Analog team. The fluid nature of analog platforms allow for minor alterations to the operational structure. Participation in analog research requires flexibility from the investigator to ensure implementation of their research into a flight like analog platform.

The compliment integration requires plasticity; investigators are asked to work closely with one another and the Flight Analog team to combine research studies into a single study plan. This study plan's ultimate goal is to facilitate multiple study participation with minimal scientific impact to each individual study. The Flight Analogs team works to find the best compromise for all parties while protecting the flight like atmosphere of a particular analog.

Additional restrictions, limitations and constraints may be required by the analog in order to make all of the science work. Many studies need to be combined into each complement and there are a limited number of hours available for data collection. Through data/sample sharing, we can reduce the burden on the test subject, while usually avoiding significant science impacts. Restrictions on food, exercise, medications and sleep cycle are important to consider for your research.